Pactor was developed by a company called SCS (a German company) many years ago. Pactor 1 (as it is now known) was released to the public domain. Kantronics, AEA (now Time Wave), MFJ, and a few others include it in their offerings even to this day. These devices are relatively inexpensive (around US$100-300).

SCS didn't stop there. They continue to build upon and improve Pactor. Pactor 2, 3, and 4 are all proprietary, but not encrypted. Thus, it is technically legal to use in the ham bands with limitations as per Part 97.309(b)(3) although one can argue it goes against the spirit of the rules nonetheless. The only way to decode Pactor 2, 3, and 4 is to buy a SCS modem. They go for between US$1000-2000. The high price of these modems plus the distaste for proprietary protocols contribute to why they have been largely shunned by the amateur radio community.

Each level of Pactor is increasingly wider due to the increased data rate at each level. The modems are designed to be backward compatible with the lower levels with commensurately decreased throughput. The bandwidth of Pactor 4 is currently the widest at approximately 2.8 kHz. Their presence in what are now the "digital" sub-bands would swamp them with only a few QSOs.

Hams experimented with Pactor 1 when it first came out, but it has since been eclipsed by other protocols which are free and do not require proprietary hardware. A general purpose computer with an appropriate sound card interface (as is typically found in the modern ham shack) is quite capable of running these newer modes. Thus, it is clear that hams are not averse to using digital modes, but are only willing to adopt those that are open source. This is part of the true spirit of the Amateur Radio Service and reflects our non-commercial nature. It also allows us to police our own bands insuring our spectrum is not improperly used.

Dr. Theodore Rappaport (N9NB) is right to point out that it is a national security concern and not just for the USA. As noted, it is already banned in some other countries. He is also right that others who are not hams may take advantage of more readily available ham equipment and use the newer Pactor modes despite not being licensed hams. There is no way to police them. Most hams don't have the equipment nor are they willing to pay the high price for a single-sourced modem to do so. Therefore, hams won't know if it legitimate, non-commercial traffic between hams or not.

The FCC has an obligation to help us protect the spectrum we have been granted.

Respectfully submitted,

Anthony Scandurra
K4QE